

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251 et. seq; the "Act"),

Rio Algom Mining LLC P.O. Box 218 Grants, NM 87020

is authorized to discharge from a facility located at the Ambrosia Lake mining area, approximately 25 miles north of Grants, McKinley County, New Mexico,

to receiving waters named an unnamed arroyo to Arroyo Del Puerto, thence to San Mateo Creek, thence to Rio San Jose, thence to Rio Puerco in stream segment 20.6.4.105 of the Rio Grande Basin

Outfall 001: Latitude 35° 22' 35" North, Longitude 107° 48' 21" West

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II, and III hereof.

This permit supersedes and replaces NPDES Permit No. NM0020532 issued on December 20, 2005.

This permit shall become effective on May 1, 2011

This permit and the authorization to discharge shall expire at midnight, April 30, 2016

Issued on March 25, 2011

Prepared by

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PART I REQUIREMENTS FOR NPDES PERMITS

A. <u>EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</u>

OUTFALL 001

During the period beginning the effective date and lasting through the expiration date, the permittee is authorized to discharge from Outfall 001 – storm water runoffs and mine drainage water.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTER	STORET CODE	DISCHARGE LIMITATIONS CONCENTRATION (mg/L UNLESS STATED)		MONITORING REQUIREMENTS FREQUENCY SAMPLE TY	
CONVENTIONAL			AVG DAILY MAX		_
Flow (MGD)	50050	Report	Report	Continuous	Record
Total Suspended Solids	00530	20	30	1/week	24-hr. composite
Chemical Oxygen Demand	00340	100	125	1/week	24-hr. composite
Gross Alpha	80029	10 pCi/l	15 pCi/l	1/week	24-hr. composite
Ra226 (dissolved)	09503	3. pCi/l	10 pCi/l	1/week	24-hr. composite
Total Ra226	09501	10 pCi/l	30 pCi/l	1/week	24-hr. composite
Ra226 + Ra228	11503	20 pCi/l	30 pCi/l	1/week	24-hr. composite
Total Uranium	22706	2	4	1/week	24-hr. composite
Total Zinc	01092	0.5	1.0	1/week	24-hr. composite
Total Selenium	01147	5 μg/l	5 μg/l	1/week	24-hr. composite
Total Cadmium	01027	0.42 μg/l	0.42 μg/l	1/week	24-hr. composite
Dissolved Cadmium	01025	Report	Report	1/week	24-hr. composite
Total Hardness		Report	Report	1/week	24-hr. composite

The pH shall not be less than 6.6 standard units nor greater than 9.0 standard units and shall be monitored 1/week by grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING		MONITORING REQUIREMENTS	
WHOLE EFFLUENT TOXICITY TESTING (48-Hour Static Renewal)	30-DAY AVG MINIMUM		MEASUREMENT FREQUENCY	SAMPLE TYPE
Daphnia pulex	Report	Report	1/3 Months	24-Hr Composite

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): At the final Outfall 001.

B. <u>EFFLUENT CHARACTERISTIC ANALYSIS</u>

The permittee shall collect the first mine water sample within 30 days after the resume of mining for analysis of effluent characteristics. A second mine water sample shall be collected within 30 days after the first sample is taken. Mine water samples may be collected from mine water treatment pond if no discharge occurs. Analytes include pollutants listed below:

POLLUTANTS	CAS No.	STORET	MQL
Radioactivity, Nutrients, and	d Chlorine		
Aluminum, dissolved	7429-90-5	01106	2.5
Boron, dissolved	7440-42-8	01022	100
Cobalt, dissolved	7440-48-4	01037	50
Vanadium, dissolved	7440-62-2	01087	50
Ra-226 and Ra-228 (pCi/l)		11503	
Tritium (pCi/l)		04124	
Gross Alpha (pCi/l)		80029	
Total Residual Chlorine	7782-50-5	50060	33
METALS AND CYANIDE			
Antimony, dissolved (P)	7440-36 - 0	01097	60
Arsenic, dissolved (P)	7440-38-2	01000	0.5
Cadmium, dissolved	7440-43-9	01025	1
Chromium, dissolved	18540-29-9	01034	10
Copper, dissolved	7440-50-8	01042	0.5
Lead, dissolved	7439-92-1	01049	0.5
Mercury, total	7439-97 - 6	71900	0.005
Nickel, dissolved (P)	7440-02-0	01065	0.5
Selenium, dissolved (P)	7782 - 49-2	01145	5
Silver, dissolved	7440-22-4	01077	0.5
Thalllium, dissolved (P)	7440-28-0	01059	0.5
Zinc, Dis.	7440-66-6	01080	20
Cyanide, weak acid			
dissociable	57-12-5	00718	10
DIOXIN			
2,3,7,8-TCDD	1 764- 01 - 6	34675	1E-05
VOLATILE COMPOUNDS			
Tetrachloroethylene	127-18-4	34475	10
ACID COMPOUNDS			
Pentachlorophenol	87-86-5	39032	50
BASE/NEUTRAL			
Benzo(a)pyrene	50-32-8	34247	5

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Hexachlorobenzene	118-74-1	39700	5
PESTICIDES AND PCBS			
Aldrin	309-00-2	39330	0.01
Gamma-BHC	58-89-9	39340	0.05
Chlordane	57 - 74-9	39350	0.2
4,4'-DDT and derivatives	50-29-3	39300	0.02
Dieldrin	60-57-1	39380	0.02
Alpha-Endosulfan	959-98-8	34361	0.01
Beta-Endosulfan	33213-65-9	34356	0.02
Endrin	72-20-8	39390	0.02
Heptachlor	76-44-8	39410	0.01
Heptachlor Epoixde	1024-57-3	39420	0.01
PCBs	1336-36-3	39516	0.2
Toxaphene	8001-35-2	39400	0.3

Note: All analytes listed in EPA Application Form 2C shall be analyzed and reported for permit renewal application.

C. REPORTING OF MONITORING RESULTS

Monitoring results shall be reported in accordance with the provisions of Part III.D.4 of the permit. Monitoring results obtained during the previous month shall be summarized and reported on a Discharge Monitoring Report form postmarked no later than the 15th day of the month following the completed reporting period.

PART II OTHER CONDITIONS

A. The term "24-hour composite sample" means a sample consisting of grab samples of effluents collected at 2-hour intervals over the 24-hour period (or over a normal discharge period if the discharge occurs less than 24 hours) and combined proportional to flow, or a sample continuously collected proportional to flow over a normal operating day.

B. Test Procedures

- a. The effluent characteristics "soluble radium 226" and "total radium 226" shall be measured by one of the approved methods in accordance with the procedures discussed for soluble radium 226 and total radium 226 in <u>Standard Methods for the Examination of Water and Wastewater</u>, latest edition, or an equivalent method.
- b. The effluent characteristic "Total Uranium" shall be measured by the procedure discussed in the <u>HASL Procedural Manual</u>, edition by John H. Harley, HASL 300 Health and Safety Laboratory, U.S. Atomic Energy Commission, 1973, pg. EU-03, or an equivalent method.

C. Radioactivity

The radioactivity of surface waters shall be maintained at the lowest practical level and shall in no case exceed the standards set forth in the New Mexico Radiation Protection Regulations, 20.3.1.400 through 20.3.1.499 NMAC (5-3-95)

D. Minimum Quantification Levels (MQLs)

If any individual analytical test result is less than the minimum quantification level listed in Appendix A, a value of zero (0) may be used for that individual result for the Discharge Monitoring Report (DMR) calculations and reporting requirements.

The permittee may develop an effluent specific method detection limit (MDL) in accordance with Appendix B to $40\underline{CFR}136$. For any pollutant for which the permittee determines an effluent specific MDL, the permittee shall send to the EPA Region 6 NPDES Permits Branch (6WQ-P) a report containing QA/QC documentation, analytical results, and calculations necessary to demonstrate that the effluent specific MDL was correctly calculated. An effluent specific minimum quantification level (MQL) shall be determined in accordance with the following calculation:

 $MQL = 3.3 \times MDL$

Upon written approval by the EPA Region 6 NPDES Permits Branch (6WQ-P), the effluent specific MQL may be utilized by the permittee for all future Discharge Monitoring Report (DMR) reporting requirements.

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E. Permit Modification and Reopener Clause

The permit may be reopened and modified during the life of the permit if relevant portions of New Mexico's Water Quality Standards for Interstate and Intrastate Streams are revised, or new State water quality standards are established and/or remanded by the New Mexico Water Quality Control Commission.

The permit may also be reopened and modified if new information is received that was not available at the time of permit issuance that would have justified the application of different permit conditions at the time of permit issuance.

F. WHOLE EFFLUENT TOXICITY TESTING (48-HOUR ACUTE NOEC FRESHWATER)

It is unlawful and a violation of this permit for a permittee or his designated agent, to manipulate test samples in any manner, to delay sample shipment, or to terminate or to cause to terminate a toxicity test. Once initiated, all toxicity tests must be completed unless specific authority has been granted by EPA Region 6 or the State NPDES permitting authority.

1. SCOPE AND METHODOLOGY

a. The permittee shall test the effluent for toxicity in accordance with the provisions in this section.

APPLICABLE TO FINAL OUTFALL(S): 001

REPORTED ON DMR AS FINAL OUTFALL: 001

CRITICAL DILUTION (%): 100%

EFFLUENT DILUTION SERIES (%): 32, 42, 56, 75, 100

COMPOSITE SAMPLE TYPE: Defined at PART I

TEST SPECIES/METHODS: 40 CFR Part 136

<u>Daphnia pulex</u> acute static renewal 48-hour definitive toxicity test using EPA-821-R-02-012, or the latest update thereof. A minimum of five (5) replicates with eight (8) organisms per replicate must be used in the control and in each effluent dilution of this test.

b. The NOEC (No Observed Lethal Effect Concentration) is defined as the greatest effluent dilution at and below which lethality that is statistically different from the control (0% effluent) at the 95% confidence level does not occur. Acute test failure is defined as a demonstration of a statistically significant lethal effect at test completion to a test species at or below the critical dilution.

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c. This permit may be reopened to require whole effluent toxicity limits, chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.

2. <u>PERSISTENT LETHALITY</u>

The requirements of this subsection apply only when a toxicity test demonstrates significant lethal effects at or below the critical dilution. Significant lethal effects are herein defined as a statistically significant difference at the 95% confidence level between the survival of the appropriate test organism in a specified effluent dilution and the control (0% effluent). The purpose of additional tests (also referred to as 'retests' or confirmation tests) is to determine the duration of a toxic event. A test that meets all test acceptability criteria and demonstrates significant toxic effects does not need additional confirmation.

Such testing cannot confirm or disprove a previous test result.

If any valid test demonstrates significant lethal effects to a test species at or below the critical dilution, the frequency of testing for this species is automatically increased to once per quarter with no option for frequency reduction.

a. Part I Testing Frequency Other Than Monthly

- i. The permittee shall conduct a total of three (3) additional tests for any species that demonstrates significant lethal effects at or below the critical dilution. The two additional tests shall be conducted monthly during the next three consecutive months. If testing on a quarterly basis, the permittee may substitute one of the additional tests in lieu of one routine toxicity test. A full report shall be prepared for each test required by this section in accordance with procedures outlined in Item 4 of this section and submitted with the period discharge monitoring report (DMR) to the permitting authority for review.
- ii. If any of the additional tests demonstrates significant lethal effects at or below the critical dilution, the permittee shall initiate Toxicity Reduction Evaluation (TRE) requirements as specified in Item 5 of this section. The permittee shall notify EPA in writing within 5 days of the failure of any retest, and the TRE initiation date will be the test completion date of the first failed retest. A TRE may be also be required due to a demonstration of intermittent lethal effects at or below the critical dilution, or for failure to perform the required retests.
- iii. The provisions of Item 2.a are suspended upon submittal of the TRE Action Plan.

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b. Part I Testing Frequency of Monthly

The permittee shall initiate the Toxicity Reduction Evaluation (TRE) requirements as specified in Item 5 of this section when any two of three consecutive monthly toxicity tests exhibit significant lethal effects at or below the critical dilution. A TRE may also be required due to a demonstration of intermittent lethal effects at or below the critical dilution, or for failure to perform the required retests.

3. REQUIRED TOXICITY TESTING CONDITIONS

a. Test Acceptance

The permittee shall repeat a test, including the control and all effluent dilutions, if the procedures and quality assurance requirements defined in the test methods or in this permit are not satisfied, including the following additional criteria:

- i. Each toxicity test control (0% effluent) must have a survival equal to or greater than 90%.
- ii. The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent) for: <u>Daphnia pulex</u> survival test.
- iii. The percent coefficient of variation between replicates shall be 40% or less in the critical dilution, <u>unless</u> significant lethal effects are exhibited for: <u>Daphnia pulex</u> survival test.

Test failure may not be construed or reported as invalid due to a coefficient of variation value of greater than 40%. A repeat test shall be conducted within the required reporting period of any test determined to be invalid.

b. Statistical Interpretation

For the <u>Daphnia pulex</u> survival test and the Fathead minnow survival test, the statistical analyses used to determine if there is a statistically significant difference between the control and the critical dilution shall be in accordance with the methods for determining the No Observed Effect Concentration (NOEC) as described in EPA-821-R-02-012 or the most recent update thereof.

If the conditions of Test Acceptability are met in Item 3.a above and the percent survival of the test organism is equal to or greater than 90% in the

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critical dilution concentration and all lower dilution concentrations, the test shall be considered to be a passing test, and the permittee shall report an NOEC of not less than the critical dilution for the DMR reporting requirements found in Item 4 below.

c. <u>Dilution</u> Water

- i. Dilution water used in the toxicity tests will be receiving water collected as close to the point of discharge as possible but unaffected by the discharge. The permittee shall substitute synthetic dilution water of similar pH, hardness, and alkalinity to the closest downstream perennial water for;
 - (A) toxicity tests conducted on effluent discharges to receiving water classified as intermittent streams; and
 - (B) toxicity tests conducted on effluent discharges where no receiving water is available due to zero flow conditions.
- ii. If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria of Item 3.a), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:
 - (A) a synthetic dilution water control which fulfills the test acceptance requirements of Item 3.a was run concurrently with the receiving water control;
 - (B) the test indicating receiving water toxicity has been carried out to completion (i.e., 48 hours);
 - (C) the permittee includes all test results indicating receiving water toxicity with the full report and information required by Item 4 below; and
 - (D) the synthetic dilution water shall have a pH, hardness, and alkalinity similar to that of the receiving water or closest downstream perennial water not adversely affected by the discharge, provided the magnitude of these parameters will not cause toxicity in the synthetic dilution water.

d. <u>Samples and Composites</u>

i. The permittee shall collect two flow-weighted composite samples from the outfall(s) listed at Item 1.a above.

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ii. The permittee shall collect a second composite sample for use during the 24-hour renewal of each dilution concentration for both tests. The permittee must collect the composite samples so that the maximum holding time for any effluent sample shall not exceed 36 hours. The permittee must have initiated the toxicity test within 36 hours after the collection of the last portion of the first composite sample. Samples shall be chilled to 6 degrees Centigrade during collection, shipping, and/or storage.

- iii. The permittee must collect the composite samples such that the effluent samples are representative of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on an intermittent basis.
- iv. If the flow from the outfall(s) being tested ceases during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions and the sample holding time are waived during that sampling period. However, the permittee must collect an effluent composite sample volume during the period of discharge that is sufficient to complete the required toxicity tests with daily renewal of effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days. The effluent composite sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report required in Item 4 of this section.

4. REPORTING

- a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this Part in accordance with the Report Preparation Section of EPA-821-R-02-012, for every valid or invalid toxicity test initiated, whether carried to completion or not. The permittee shall retain each full report pursuant to the provisions of PART III.C.3 of this permit. The permittee shall submit full reports upon the specific request of the Agency. For any test which fails, is considered invalid or which is terminated early for any reason, the full report must be submitted for agency review.
- b. A valid test for each species must be reported on the DMR during each reporting period specified in PART I of this permit unless the permittee is performing a TRE which may increase the frequency of testing and reporting. Only <u>ONE</u> set of biomonitoring data for each species is to be

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recorded on the DMR for each reporting period. The data submitted should reflect the <u>LOWEST</u> Survival results for each species during the reporting period. All invalid tests, repeat tests (for invalid tests), and retests (for tests previously failed) performed during the reporting period must be attached to the DMR for EPA review.

c. The permittee shall report the following results of each valid toxicity test on the subsequent monthly DMR for that reporting period in accordance with PART III.D.4 of this permit. Submit retest information clearly marked as such with the following month's DMR. Only results of valid tests are to be reported on the DMR.

i. <u>Daphnia pulex</u>

- (A) If the NOEC for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TEM3D
- (B) Report the NOEC value for survival, Parameter No. TOM3D.
- (C) Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQM3D.
- d. Enter the following codes on the DMR for retests only:
 - i. For retest number 1, Parameter 22415, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
 - ii. For retest number 2, Parameter 22416, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

5. TOXICITY REDUCTION EVALUATION (TRE)

a. Within ninety (90) days of confirming lethality in the retests, the permittee shall submit a Toxicity Reduction Evaluation (TRE) Action Plan and Schedule for conducting a TRE. The TRE Action Plan shall specify the approach and methodology to be used in performing the TRE. A Toxicity Reduction Evaluation is an investigation intended to determine those actions necessary to achieve compliance with water quality-based effluent limits by reducing an effluent's toxicity to an acceptable level. A TRE is defined as a step-wise process which combines toxicity testing and analyses of the physical and chemical characteristics of a toxic effluent to identify the constituents causing effluent toxicity and/or treatment methods which will reduce the effluent toxicity. The TRE Action Plan

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shall lead to the successful elimination of effluent toxicity at the critical dilution and include the following:

Specific Activities. The plan shall detail the specific approach the i. permittee intends to utilize in conducting the TRE. The approach may include toxicity characterizations, identifications and confirmation activities, source evaluation, treatability studies, or alternative approaches. When the permittee conducts Toxicity Characterization Procedures the permittee shall perform multiple characterizations and follow the procedures specified in the documents "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA-600/6-91/003) or alternate procedures. When the permittee conducts Toxicity Identification Evaluations and Confirmations, the permittee shall perform multiple identifications and follow the methods specified in the documents "Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081), as appropriate.

The documents referenced above may be obtained through the <u>National Technical Information Service</u> (NTIS) by phone at (703) 487-4650, or by writing:

U.S. Department of Commerce National Technical Information Service 5285 Port Royal Road Springfield, VA 22161

ii. Sampling Plan (e.g., locations, methods, holding times, chain of custody, preservation, etc.). The effluent sample volume collected for all tests shall be adequate to perform the toxicity test, toxicity characterization, identification and confirmation procedures, and conduct chemical specific analyses when a probable toxicant has been identified;

Where the permittee has identified or suspects specific pollutant(s) and/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical specific analyses for the identified and/or suspected pollutant(s) and/or source(s) of effluent toxicity. Where lethality was demonstrated within 24 hours of test initiation, each composite sample shall be analyzed independently. Otherwise the permittee may substitute a composite sample,

- comprised of equal portions of the individual composite samples, for the chemical specific analysis;
- iii. Quality Assurance Plan (e.g., QA/QC implementation, corrective actions, etc.); and
- iv. Project Organization (e.g., project staff, project manager, consulting services, etc.).
- b. The permittee shall initiate the TRE Action Plan within thirty (30) days of plan and schedule submittal. The permittee shall assume all risks for failure to achieve the required toxicity reduction.
- c. The permittee shall submit a quarterly TRE Activities Report, with the Discharge Monitoring Report in the months of January, April, July and October, containing information on toxicity reduction evaluation activities including:
 - i. any data and/or substantiating documentation which identifies the pollutant(s) and/or source(s) of effluent toxicity;

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ii. any studies/evaluations and results on the treatability of the facility's effluent toxicity; and

iii. any data which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant lethality at the critical dilution.

A copy of the TRE Activities Report shall also be submitted to the state agency.

d. The permittee shall submit a Final Report on Toxicity Reduction Evaluation Activities no later than twenty-eight (28) months from confirming lethality in the retests, which provides information pertaining to the specific control mechanism selected that will, when implemented, result in reduction of effluent toxicity to no significant lethality at the critical dilution. The report will also provide a specific corrective action schedule for implementing the selected control mechanism.

A copy of the Final Report on Toxicity Reduction Evaluation Activities shall also be submitted to the state agency.

e. Quarterly testing during the TRE is a minimum monitoring requirement. EPA recommends that permittees required to perform a TRE not rely on quarterly testing alone to ensure success in the TRE, and that additional screening tests be performed to capture toxic samples for identification of toxicants. Failure to identify the specific chemical compound causing toxicity test failure will normally result in a permit limit for whole effluent toxicity limits per federal regulations at 40 CFR 122.44(d)(1)(v).

6. MONITORING FREQUENCY REDUCTION

- a. The permittee may apply for a testing frequency reduction upon the successful completion of the first four consecutive quarters of testing for one or both test species, with no lethal effects demonstrated at or below the critical dilution. If granted, the monitoring frequency for that test species may be reduced to not less than once per year for the less sensitive species (usually the Fathead minnow) and not less than twice per year for the more sensitive test species (usually the Daphnia pulex).
- b. CERTIFICATION The permittee must certify in writing that no test failures have occurred and that all tests meet all test acceptability criteria in item 3.a. above. In addition the permittee must provide a list with each test performed including test initiation date, species, NOECs for lethal effects and the maximum coefficient of variation for the controls. Upon review and acceptance of this information the agency will issue a letter of confirmation of the monitoring frequency reduction. A copy of the letter

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- will be forwarded to the agency's Permit Compliance System section to update the permit reporting requirements.
- c. SURVIVAL FAILURES If any test fails the survival endpoint at any time during the life of this permit, three monthly retests are required and the monitoring frequency for the affected test species shall be increased to once per quarter until the permit is re-issued. Monthly retesting is not required if the permittee is performing a TRE.
- d. This monitoring frequency reduction applies only until the expiration date of this permit, at which time the monitoring frequen

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The following Minimum Quantification Levels (MQL's) are to be used for reporting pollutant data for NPDES permit applications and/or compliance reporting.

POLLUTANTS	MQL μg/l	POLLUTANTS	MQL μg/l			
METALS, RADIOACTIVITY, CYANIDE and CHLORINE						
Aluminum	2.5	Molybdenum	10			
Antimony	60	Nickel	0.5			
Arsenic	0.5	Selenium	5			
Barium	100	Silver	0.5			
Beryllium	0.5	Thalllium	0.5			
Boron	100	Uranium	0.1			
Cadmium	1	Vanadium	50			
Chromium	10	Zinc	20			
Cobalt	50	Cyanide	10			
Copper	0.5	Cyanide, weak acid dissociable	10			
Lead	0.5	Total Residual Chlorine	33			
Mercury *1	0.0005					
•	0.005					
	DI	OXIN				
2,3,7,8-TCDD	0.00001					
	VOLATILE	COMPOUNDS				
Acrolein	50	1,3-Dichloropropylene	10			
Acrylonitrile	20	Ethylbenzene	10			
Benzene	10	Methyl Bromide	50			
Bromoform	10	Methylene Chloride	20			
Carbon Tetrachloride	2	1,1,2,2-Tetrachloroethane	10			
Chlorobenzene	10	Tetrachloroethylene	10			
Clorodibromomethane	10	Toluene	10			
Chloroform	50	1,2-trans-Dichloroethylene	10			
Dichlorobromomethane	10	1,1,2-Trichloroethane	10			
1,2-Dichloroethane	10	Trichloroethylene	10			
1,1-Dichloroethylene	10	Vinyl Chloride	10			
1,2-Dichloropropane	10					
ACID COMPOUNDS						
2-Chlorophenol	10	2,4-Dinitrophenol	50			
2,4-Dichlorophenol	10	Pentachlorophenol	5			
2,4-Dimethylphenol	10	Phenol	10			
4,6-Dinitro-o-Cresol	50	2,4,6-Trichlorophenol	10			

F. **DEFINITIONS**

All definitions contained in Section 502 of the Act shall apply to this permit and are incorporated herein by reference. Unless otherwise specified in this permit, additional definitions of words or phrases used in this permit are as follows:

- 1. ACT means the Clean Water Act (33 U.S.C. 1251 et. seq.), as amended.
- 2. ADMINISTRATOR means the Administrator of the U.S. Environmental Protection Agency.
- APPLICABLE EFFLUENT STANDARDS AND LIMITATIONS means all state and Federal effluent standards and limitations to which a discharge is subject under the Act, including, but not limited to, effluent limitations, standards or performance, toxic effluent standards and prohibitions, and pretreatment standards.
- 4. <u>APPLICABLE WATER QUALITY STANDARDS</u> means all water quality standards to which a discharge is subject under the Act.
- 5. <u>BYPASS</u> means the intentional diversion of waste streams from any portion of a treatment facility.
- 6. <u>DAILY DISCHARGE</u> means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in terms of mass, limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the sampling day. "Daily discharge" determination of concentration made using a composite sample shall be the shall be arithmetic average (weighted by flow value) of all samples collected during that sampling day.
- 7. DAILY MAXIMUM discharge limitation means the highest allowable "daily discharge" during the calendar month.
- 8. <u>DIRECTOR</u> means the U.S. Environmental Protection Agency Regional Administrator or an authorized representative.
- 9. <u>ENVIRONMENTAL PROTECTION AGENCY</u> means the U.S. Environmental Protection Agency.
- 10. GRAB SAMPLE means an individual sample collected in less than 15 minutes.
- 11. <u>INDUSTRIAL USER</u> means a non-domestic discharger, as identified in 40 CFR 403, introducing pollutants to a publicly owned treatment works.
- 12. MONTHLY AVERAGE (also known as DAILY AVERAGE) discharge limitations means the highest allowable average of divided by the number of "daily discharge(s)" measured during that month. When the permit establishes daily average flow) of all "daily discharge(s)" of concentration determined during the calendar month where C = daily concentration, F = daily flow, and n = number of daily samples; daily average discharge =

$$C_1F_1 + C_2F_2 + ... + C_nF_n$$

 $F_1 + F_2 + ... + F_n$

- NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of the Act.
- 14. <u>SEVERE PROPERTY DAMAGE</u> means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
- 15. <u>SEWAGE SLUDGE</u> means the solids, residues, and precipitates separated from or created in sewage by the unit processes of a publicly owned treatment works. Sewage as used in this definition means any wastes, including wastes from humans, households, commercial establishments, industries, and storm water runoff that are discharged to or otherwise enter a publicly owned treatment works.
- 16. TREATMENT WORKS means any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage and industrial wastes of a liquid nature to implement Section 201 of the Act, or necessary to recycle or reuse water at

the most economical cost over the estimated life of the works, including intercepting sewers, sewage collection systems, pumping, power and other equipment, and their appurtenances, extension, improvement, remodeling, additions, and alterations thereof.

- 17. <u>UPSET</u> means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- FOR FECAL COLIFORM BACTERIA, a sample consists of one effluent grab portion collected during a 24-hour period at peak loads.
- 19. The term "MGD" shall mean million gallons per day.
- 20. The term "mg/L" shall mean milligrams per liter or parts per million (ppm).
- 21. The term "ug/l." shall mean micrograms per liter or parts per billion (ppb).

22. MUNICIPAL TERMS

- a. 7-DAY AVERAGE or WEEKLY AVERAGE, other than for fecal coliform bacteria, is the arithmetic mean of the daily values for all effluent samples collected during a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week. The 7-day average for fecal coliform bacteria is the geometric mean of the values for all effluent samples collected during a calendar week.
- b. 30-DAY AVERAGE or MONTHLY AVERAGE, other than for fecal coliform bacteria, is the arithmetic mean of the daily values for all effluent samples collected during a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. The 30-day average for fecal coliform bacteria is the geometric mean of the values for all effluent samples collected during a calendar month.
- c. <u>24-HOUR COMPOSITE SAMPLE</u> consists of a minimum of 12 effluent portions collected at equal time intervals over the 24-hour period and combined proportional to flow or a sample collected at frequent intervals proportional to flow over the 24-hour period.
- d. 12-HOUR COMPOSITE SAMPLE consists of 12 effluent portions collected no closer together than one hour and composited according to flow. The daily sampling intervals shall include the highest flow periods.
- 6-HOUR COMPOSITE SAMPLE consists of six effluent portions collected no closer together than one hour (with the first portion collected no earlier than 10:00 a.m.) and composited according to flow,
- f. 3-HOUR COMPOSITE SAMPLE consists of three effluent portions collected no closer together than one hour (with the first portion collected no earlier than 10:00 a.m.) and composited according to flow.